



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,915	05/25/2001	Thomas Daniel	208608USOPCT	2083

22850 7590 08/09/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

METZMAIER, DANIEL S

ART UNIT PAPER NUMBER

1712

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,915

Applicant(s)

DANIEL ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2001 & 03 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/03/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-12 are pending.

Priority

1. Receipt is acknowledged of papers received in this national stage application from the International Bureau (PCT Rule 17.2(a)), submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: the paragraph bridging pages 6 and 7 of the specification refers to figure 8 having elements (37), (39) and (40) in an apparatus set forth in EP-A-0 640 330 and not otherwise disclosed herein. Said disclosure describes the measure of the "gel layer permeability (GLP)". The GLP is specifically claimed in claims 8 and 9.

Although said subject matter is NOT incorporated by reference, the incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 8 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 8 and 9 claim the GLP of the gel. Applicants have not adequately disclosed how said property is measured. See above reference to the disclosure of the GLP in the specification.

7. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for olefinically unsaturated carboxylic acids or the derivatives set forth at page 3, lines 26-31, does not reasonably provide enablement for all derivatives of olefinically unsaturated carboxylic acids. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Specifically, applicants do not provide adequate description for the scope of the claimed subject matter to include derivatives of olefinically unsaturated carboxylic acids having various substituents, such as cationic substituents and hydrophobic substituents. It is unclear what permutations of monomers in copolymers having such substituents would function as absorbing aqueous fluids. Said substituents would clearly effect the

Art Unit: 1712

absorbing properties of the materials but applicants have not set forth a description of said materials.

Applicants claimed "derivatives thereof" is an invitation for experimentation since it is unclear what is the scope of said materials. Said limitation reads on materials applicants do not provide any description and it is unclear that said materials would function as disclosed.

8. Claims 11 and 12¹ provide for the use of polymers, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 11 and 12 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claims 11 and 12 have not been further treated on the merits since they are too unclear and/or do not fall within a proper statutory class of invention.

9. Claims 2-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "olefinically unsaturated carboxylic acids or derivatives thereof" is indefinite since it is unclear what is the scope of "derivatives thereof". Applicants have provided Useful examples at page 3, lines 26-31, of the specification but have not set forth how one skilled in the art would determine the scope of said limitation.

Claims 2-10 refer to the polymer of claim 1. While claim 1 refers to a polymerization, claim 1 is directed to a "hydrogel capable of absorbing aqueous fluids". It is unclear what is the intended scope of applicants' claims.

The GLP gel permeability in claims 8 and 9 are indefinite since the parameters of said measure has not been defined. Claim 1, which claims 8 and 9 depend, is directed to a dried hydrogel. Claims 8 and 9 are directed a gel permeability. It is unclear when said measure is made, i.e., before drying, after drying, after absorbing aqueous fluid as a swollen gel.

Claims 4 and 5 claim the combination of alkali metal silicates and either alkali metal hydroxide or alkali metal carbonate. Said limitation renders the ratio defined by "n" in claim 1 indefinite because said alkali metal hydroxide and/or the alkali metal carbonate would be expected to dissociate and form at least part of the M_2O denoted as part of the alkali metal silicate.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

¹ Claims 11 and 12 are improperly drafted "use" claims and are therefore not able to be properly classified. To the extent said claims are amended, the amended claims may properly be the subject of a

Art Unit: 1712

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 1 and 4-10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sekisui Plastics Co LTD, JP 06-016822, as evidenced by the JPO machine translation at <http://www19.ipdl.jpo.go.jp/PA1/cgi-bin/PA1INDEX>. Sekisui Plastics Co LTD (abstract, paragraphs [0010] and [0011], and examples 1 and 6) discloses water absorbing resin particles employing by the addition of lithium silicate ($\text{Li}_2\text{O}_3\text{Si}$).

restriction.

Art Unit: 1712

The structure denoted $(\text{Li}_2\text{O}_3\text{Si})$ equates to $\text{Li}_2\text{O} \times n \text{ SiO}_2$, wherein $n = 1$. Sekisui Plastics Co LTD (paragraph [0010]) discloses partially neutralized absorptive resins. These would inherently read on alkali metal hydroxide neutralized salts. Sekisui Plastics Co LTD (paragraph [0001]) discloses absorbing materials for sanitary goods. The pH of 3.5 to 9.0 would be inherent for said utilities as a hypoallergenic pH.

Sekisui Plastics Co LTD (example 1) discloses the materials are dried. Applicants have not shown the temperature of drying, the pH of the hydrated hydrogel, or the gel permeability of the hydrated gel to impart patentable distinction to the dried products.

Regarding the gel permeability, said permeability has been given little patentable weight since the conditions said permeability was measured have not been set forth. It is reasonable to conclude that the prior art dried gels would read on gels having a GLP of not less than $25 \times 10^{-7} \text{ cm}^3\text{sec/g}$ or not less than $4 \times 10^{-7} \text{ cm}^3\text{sec/g}$ under the appropriate conditions. Said properties of the gels do not impart patentable distinction to the dried products claimed.

To the extent the properties of the alkali metal silicate and/or the properties of the gels in the Sekisui Plastics Co LTD reference differ from the claims, some variation of the gel properties would have been an obvious variation since the materials are disclosed for the same utility and since the gel strength is a commonly known product variable.

To the extent the Sekisui Plastics Co LTD reference differ in that it is silent regarding the neutralization with and an alkali metal hydroxides and salts are the most

Art Unit: 1712

common neutralizing agents employed in neutralizing resins. Alkali metal hydroxide or alkali metal carbonates would have been obvious neutralizing agents for neutralizing the partially neutralized absorbing resins, to one having ordinary skill in the art at the time of applicant's invention. There is no evidence of record that any particular alkali metal would be unexpected in view of the prior art use of lithium silicates.

14. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over The Procter & Gamble Company (hereafter P & G), WO 97/46189. P & G (abstract examples and claims) disclose absorbent articles having odor control comprising a combination of an absorbent gelling material and silica.

P & G differ from the instant claims in an exemplified process of making² and an exemplified absorbent articles as claimed and the ratio of the sodium oxide to silica.

P & G (page 4, lines 1 et seq) discloses absorbent gelling materials useful in the P & G materials. Said absorbent gelling agents disclosed include hydrogel-forming polymer materials prepared from polymerizable, unsaturated, acid-containing monomers.

P & G (page 5, first full paragraph) discloses the hydrogel-forming absorbent gelling agents are partially neutralized with cations including alkali metals. P & G (page 7, ~lines 16-18) discloses the silica may be provided from sodium silicates. While the ratio of alkali metal oxide to silicate are not specifically disclosed, said ratio reads on commercially available water glass (i.e., sodium silicate). It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ a

commercially available sodium silicate generally having a sodium oxide to silica ratio of about 0.5.

P & G (page 8, second paragraph) discloses ratios of gelling agents to silica of from 1:5 TO 1:1. Said ratio would read on the concentrations of claims 2 and 3.

P & G (page 8, forth paragraph) discloses the odor control system may be incorporated into the absorbent article by any of the methods known in the art. Applicants have not shown the process, which the hydrogels are capable of absorbing fluids, impart patentable distinction over those disclosed and claimed in the P & G reference.

P & G (page 5, first full paragraph) discloses the hydrogel-forming absorbent gelling agents are partially neutralized with cations including alkali metals. Sodium hydroxide is an obvious alkali metal source for carboxylic acid neutralization. P & G (page 1, third full paragraph) discloses the use of carbonates in controlling odors in acidic pH environments. P & G (pages 1 and 2) further discloses the use of combinations of odor controlling agents.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ alkali metal hydroxide and/or alkali metal carbonate in combination with the sodium silicate disclosed and claimed in the P & G reference for the advantage of controlling odor in an acidic odor environment.

It is generally *prima facie* obvious to use in combination two or more ingredients that have previously been used separately for the same purpose in order to form a third

² "Even though product-by-process claims are limited by and defined by the process, determination of

composition useful for that same purpose. *In re Kerkhoven*, 626 F.2d 846, 205 USPQ 1069 (CCPA 1980); *In re Pinten*, 459 F.2d 1053, 173 USPQ 801 (CCPA 1972); *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971); *In re Crockett*, 279 F.2d 274, 126 USPQ 186 (CCPA 1960). As stated in *Kerkhoven* and *Crockett*, the idea of combining them flows logically from their having been individually taught in the prior art.

The GLP gel permeability would have been expected to have been inherent and/or obvious for use as an absorbent taught in the prior art reference and applicants same utility and employing the same materials.

Conclusion

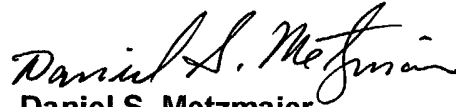
15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM